ABSTRACT OF DISCLOSURE

The present invention relates to the development of a pharmacological non-human animal model that associates memory loss to histopathological features found in the brain of a subject having Alzheimer's Disease. In one embodiment, a four-week continuous infusion of a Fe^{2+}, $A\beta_{42}$ and buthionine sulfoximine (FAB) solution in the left ventricle of young adult Long-Evans rats induced memory impairment accompanied by increased hyperphosphorylated Tau protein levels in cerebrospinal fluid. Brains from treated animals displayed neuritic plaques, tangles, neuronal loss, astrogliosis and microgliosis in hippocampus and cortex. The present invention may be utilized in evaluating preventive, therapeutic and diagnostic means for neurologic diseases.